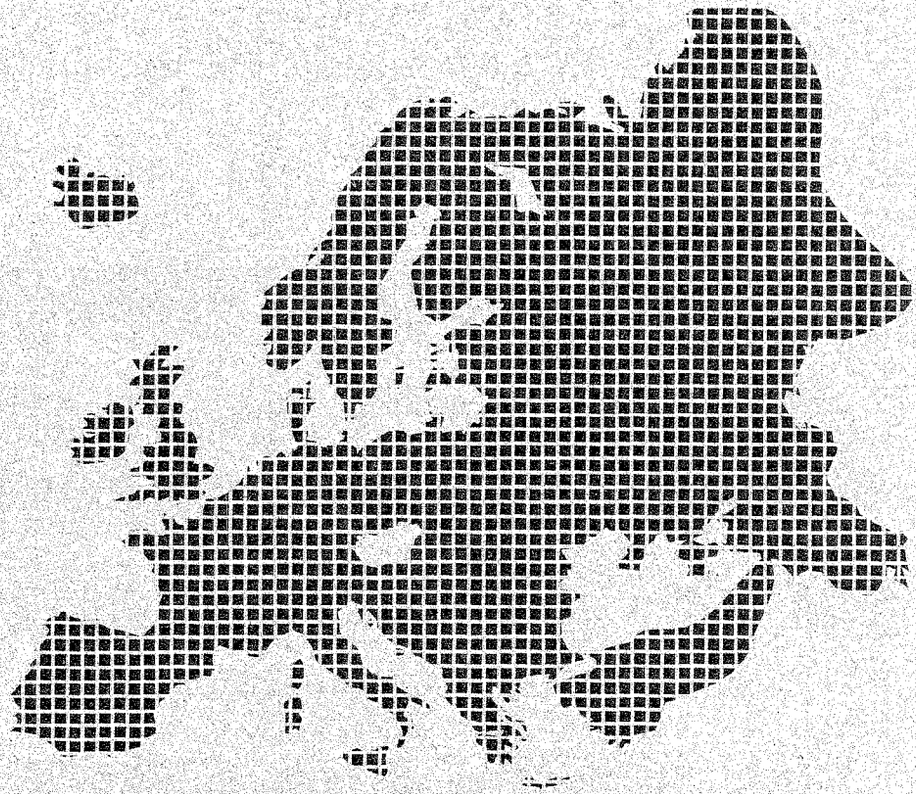
1st European Congress of Conservation Biology

"Diversity for Europe"

Society for Conservation Biology

HUNGARIAN NATURAL HISTORY MUSEUM



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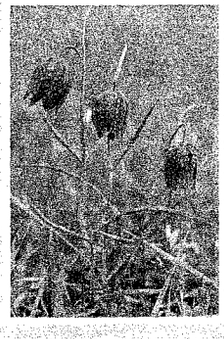
Book of Abstracts







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Auchenorrhyncha species were found to be "fallow specialists". The orchids Dactylorhiza incarnata and Orchis morio showed a 90% decline in flowering in the fallows. The flowering of Iris sibirica was delayed by several days. These effects are only partly reversible. As expected, fen rotational fallows are not "positive" for all groups of arthropods and plants, but can be useful for conserving many endangered species.

99. BIODIVESITY, LANDSCAPE AND PEOPLE IN THE CONSERVATION OF URBAN BLUE SPACES: A CASE STUDY OF PONDS IN THE NORTHWEST OF ENGLAND

GLEDHILL, DAVID, University of Salford, United Kingdom; **James, Philip**, University of Salford, United Kingdom; **Davies, David**, University of Salford, United Kingdom

The northwest of England has one of the densest pond landscapes in Europe. Continued urban expansion has seen many former rural ponds incorporated into urban developments. This paper considers a case study of 18 ponds in Halton, northwest England. Ecological quality was assessed following the Predictive SYstem for Multimetrics (PSYM) methodology. Faunal and floral (vascular plant) diversity were recorded and an assessment of the Landscape Character surrounding each pond was noted. Aesthetic attributes were recorded by monthly fixed-point photographs. The median species diversities were 26 invertebrate and 10 plant species per pond. Amphibians were found in 15 out of 18 ponds with Rana temporaria and Lissotriton vulgaris being the most frequent. A significant relationship between increasing diversity of aquatic macrophytes, structural diversity of vegetation and the diversity of aquatic invertebrate was identified (F=24.77 P=0.0001) and increased with the amount of green spaces within 250m. The composition of invertebrates exhibited changes with increasing housing density. There was a high degree of variation in visual impact between ponds and across the year.Human activities such as feeding wildfowl, fishing and the introduction of exotics impact pond ecology and the people-nature relationship requires careful consideration especially when manageing urban sites.

100. THE SPECIES-AREA RELATIONSHIP FOR VASCULAR PLANTS IN THREE HABITATS IN NORTHERN PORTUGAL

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Understanding how diversity in partitioned into different components is of great importance for conservation management. Comparision of diversity patterns across scales often use data from different studies that show a large methodological variation and are confined to specific land use types. We studied the species-area relationship for plant diversity in a nested hierarchy of scales across different habitats - forests, scrubland and agricultural fields. Field studies were conducted in Peneda mountain range, in northwest Portugal. Although there are differences in alpha diversity in the different habitats they show similar values of beta diversity. Slopes of the species-area relationship varied across scales suggesting that different factors are affecting different scales. Similarity between different habitats was calculated at the species and family level. Agricultural fields was the habitat with less similarity with the other two, but in all habitats similarity decreased with distance between plots.

101. INFLUENCE OF VEGETATION AND CATTLE GRAZING IN HABITAT SELECTION OF IBERIAN HARE (LEPUS GRANATENSIS) IN SOUTH PORTUGAL

GONÇALVES, PAULA, Universidade de Évora, Portugal; **Santos-Reis, Margarida**, Faculdade de Ciencias da Universidade de Lisboa, Portugal; **Mira, Antonio**, Universidade de Évora, Portugal

Iberian hare (Lepus granatensis), is an endemic species of the Iberian Peninsula, usually associated with open spaces. These areas are also often used for cattle grazing in free range. Our main goal is to understand the impact of grazing in the presence and abundance of hares. The main land uses in the study site (proposed Natura 2000) are sparse oak stands, known as montado, with different understory shrub densities. Pastures, grassland, fallows lands and crops fields are also present. Twice a month, during five months, we made night transects in four different areas, and registered the hares and cattle observed. Transects were divided in segments and the relationships between cattle and hares analysed. Hares selected positively areas of oak stands with median tree density and without shrubs. However, space use was dependent on the presence of cattle. They strongly avoided sites with cattle, even in small numbers, and use less areas that were often grazed. Our results will be useful to establish guidelines to manage cattle grazing in free range, in terms of numbers of animals and time of permanence on each location.

102. THE TRADE-OFF BETWEEN IMPROVING DATA AND IMPLEMENTING CONSERVATION ACTION

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The aim of this project was to investigate the resource allocation trade-off between improving data on species and implementing conservation action to promote the persistence of those species. We constructed scenarios where the objective was to optimise species persistence within a conservation system, constituting both reserves and off-reserve management areas. Our two main constraints were that the distributions of species were unknown, and there was ongoing destruction of species habitat. A fixed amount of money was available annually to allocate between two options: improving data or implementing conservation action. Several scenarios were investigated using different types of data. The problem is significant because it addresses a typical situation: the combination of progressive loss of species habitat and limited conservation resources. It is also significant because the choice between collecting additional data or implementing additional conservation areas is seldom made explicitly. Depending on the effectiveness with which surrogates like vegetation types represent the distributions of species, too much survey effort can reduce money for implementation and allow important areas for species to be lost. On the other hand, insufficient data can lead to outright loss of species due to poor placement of conservation areas.

103. ESTIMATING SPECIES RICHNESS: IMPLICATIONS OF NOT TAKING ACCOUNT OF HABITAT HETEROGENEITY

GRAY, JOHN S., Marine Biodiversity Research program, Department of Biology, University of Oslo, Norway; **Ugland, Karl I.**, Marine Biodiversity Research program, Department of Biology, University of Oslo, Norway; **Thrush, Simon F.**, National Institute of Water and Atmospheric Research, New Zealand; **Hewitt Judi E.**, National Institute of Water and Atmospheric Research, New Zealand

The classical way to estimate species richness of a given area is to plot the cumulative number of species observed as the samples are accumulated. Samples are randomized so that sample order is not considered. The resulting species-accumulation curve can be fitted using two newly developed analytical approaches (Ugland et al. 2003 and Cao et al. 2005). Yet such curves rarely reach an asymptote and the problem is to estimate how many species might occur in the area if a complete sample had been taken. A variety of non-parametric methods have been developed most of which are based on how many singleton species occur and estimating the number of missing singletons. The randomization techniques do not take into account that sub-areas may be species rich or species poor due to habitat heterogeneity. We developed a model (Ugland et al.